

International Forum on Ecology & Evolution of Avian Influenza

A webinar series by leading scientists (5/2021 - 12/2024)

November 23, 2021, Tuesday, 9am – 10am, China

November 22, 2021, Monday, 8pm - 9pm, EDT, USA



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http://cvm.cau.edu.cn/art/2015/1/6/art_41955_33.html

Prof. Yipeng Sun received her PhD in Veterinary Medicine from China Agricultural University. She had over 15 years of research experience investigating epidemics and pathogenesis of animal influenza viruses. She focuses on understanding how influenza viruses jump between host species and how we can improve our pandemic preparedness and response. She has published over 60 scientific papers in this area. She was awarded with Excellent Young Scientist program of NSFC, and Changjiang Young Scholar of Ministry of Education of China.

Evolution of H9N2 avian influenza virus in naïve and vaccinated chickens

H9N2 avian influenza virus (AIV) is transmitted in poultry and humans. China has been using H9N2 inactivated vaccine for a long time, but this virus is still prevalent. Hence, understanding how do H9N2 AIV mutate in vaccinated chickens is important for virus control. Here we characterized the evolution and mutational spectra of H9N2 AIV populations within naïve and vaccinated chickens linked by natural transmission. We show that H9N2 AIV improves its replication ability through genome-wide cooperative mutation under pressure of vaccine immunization. Additionally, the increased genetic diversity of H9N2 AIV in vaccinated chickens improved the opportunity of cross-host transmission. Thus, it is necessary to develop a novel form that can effectively inhibit the replication of H9N2 AIV to prevent the frequent mutation of this virus.

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Organizers: University of Oklahoma, St. Jude Children's Research Hospital, USGS EESC;
Sun Yat-sen University; China Agricultural University; CNIC, IVDC, China CDC

Organizing Committee Chairs: Xiangming Xiao (University of Oklahoma, USA), and Yuelong Shu (Sun Yat-sen University, China)